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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,669	02/24/2000	Ulrike Jeck-Prosch	32140-153023	5754
26694	7590	08/26/2004	EXAMINER	
VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998			CLEVELAND, MICHAEL B	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/512,669

Applicant(s)

JECK-PROSCH ET AL.

Examiner

Michael Cleveland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43,51,52 and 60-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43,51,52 and 60-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 43, 51, 52, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Meara et al. (U.S. Patent 5,682,009, hereafter '009) in view of Lutz (U.S. Patent 5,520,757, hereafter '757).

Claim 43: '009 teaches mixing (i.e., surface treating) with a monobasic (col. 2, lines 54-64) propellant powder in slurry with nitroglycerin, an energetic, monomer softener (col. 5, lines 1-12), mixing (i.e., surface treating with) at least one inert polymer (col. 5, lines 13-37), such as the cellulose esters listed in col. 4, lines 1-60, and drying the propellant (col. 5, lines 37-40) to recover particles treated with the reagent (col. 6, lines 36-48). The product is layered because it contains particles (16) dispersed within particulate (10) (See Fig. 1).

'009 teaches adding nitroglycerin to a nitrocellulose to form a double base propellant powder, as described above. It does not teach adding an alkyl nitrateoethyl nitramine (NENA). However, '757 teaches alkyl NENAs as advantageous replacements for nitroglycerin for the reasons given in col. 1, lines 15-54. The alkyl NENAs include compounds such as methyl NENA (col. 2, lines 51-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the nitroglycerin of '009 with the methyl NENA of '757 in order to have achieved the resistance to crystallization described in col. 1, lines 15-54 of '757 with a reasonable expectation of success.

Claims 51-52: The mixing is performed by applying the polymer in an aqueous solution (col. 5, lines 13-22) and heating the solution over time and allowing the polymer to penetrate into the propellant grains (i.e., by incubating in an impregnating solution).

3. Claims 43, 51-52, and 60-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boileau et al. (U.S. Patent 5,174,837, hereafter '837) in view of Haaland et al. (U.S. Patent 5,759,458, hereafter '458).

'837 teaches a method of producing a layered propellant, comprising coating (i.e., surface treating) granules of the propellant, which may be mono-, di, or tribasic (col. 2, lines 54-68) with an energetic thermoplastic material (col. 3, lines 20-22). The coated powder may be dried and recovered (col. 7, lines 30-37).

'837 does not teach that the energetic thermoplastic material is polyglycidyl azide. However, the selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See MPEP 2144.07. '458 teaches the use of polyglycidyl azide (GAP) as an energetic thermoplastic material in propellants. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used GAP as the particular energetic thermoplastic material of '837 with a reasonable expectation of success because '458 teaches that it is suitable as an energetic thermoplastic material for propellants.

Claims 51-52: The coating is applied in solution (col. 5, lines 60-68) in a rotating pellet mill (i.e., drum) (col. 6, lines 1-5).

Claims 60-63: The propellant may be a 1-hole propellant (col. 5, lines 54-56). Because the combination suggests applying the same material to materials of the same configuration, it must either inherently partially or completely cover the holes of the particles or else such feature results from essential features which are not present in the claims.

Claim 64: The coating solution may comprise a cellulose ester (col. 4, lines 3-8).

Response to Arguments

4. Applicant's arguments filed 3/3/04, 3/15/04, and 6/14/04 have been fully considered but they are not persuasive. The rejection under 35 USC 102(b) in view of Willer is withdrawn because it is not clear whether Willer recovers its final propellant as

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granules or a large, solid mass. The rejection under 35 USC 102(b) in view of Lutz is withdrawn because it is not clear that Lutz recovers its final propellant as granules.

Applicant's argument that "dispersing" and "mixing" are not the same as "surface treating" are noted. They are unconvincing because "treat" means "to act upon with some agent esp. to improve or alter" (*Merriam-Webster's Collegiate Dictionary*, 10th edn.). Any act of dispersing a solid material within another material or mixing a solid material with another material necessarily involves action of the other material on the solid material at the surface of the solid material. Therefore, "dispersing" and "mixing" in the sense described by the cited references necessarily meets the limitation of "surface treating".

In response to applicant's arguments against the references O'Meara and Lutz individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). O'Meara teaches surface treatment with nitroglycerine to form a propellant, and Lutz teaches that alkyl NENAs are superior to nitroglycerine.

Applicant's comments regarding claim construction are noted. However, when Applicant argues that the cited references include elements which are not present in the claims, the arguments cannot be convincing unless the claims contain limitations which exclude those elements.

The color photographs have been received by the Office.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cleveland whose telephone number is (571) 272-1418. The examiner can normally be reached on Tuesday-Friday and alternate Mon, 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Cleveland
Patent Examiner
August 20, 2004